Community respiratory virus infections in the imunocompromised host

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During the last 15 years community respiratory virus (CRV) infections have been recognized as a not infrequent cause of serious illnesses in patients with acute leukemia and in bone marrow transplant (BMT) recipients. Most of the reported series include relatively small number of cases over a protracted period of time. During the last 3 years we became aware of the increasing number of these infections in our institution and hence, conducted a review to determine the incidence and outcome compared to our previous experience. Between July 2000 and March 2002, 321 cases of CRV infections were diagnosed among adult patients with acute respiratory illnesses (ARI), the majority of whom were BMT recipients and patients with hematologic malignancies. There were 104 cases (32%) of respiratory syncytial viruses (RSV), 74 (23%) influenza A, 37 (12%) influenza B, 73 (23%) parainfluenza and 33 cases (10%) of picornaviruses. The infection progressed to pneumonia in 113 cases (35%) of whom 33% had RSV, 32% influenza, 25% parainfluenza and 11% picornaviruses. Overall pneumonia-associated mortality was 13% (RSV 19%, parainfluenza 14%, influenza 8% and picornaviruses 8%). All the patients with pneumonia had radiographic evidence of pneumonia and virus was cultured from bronchoalveolar lavage fluids in 31 cases and in 84 cases diagnosis was made only from nasopharyngeal wash/throat swab specimens. There was no standardized treatment utilized but patients who received early treatment with aerosolized ribavirin with IVIG and/or palivizumab for RSV and oseltamivir for influenza and parainfluenza viruses appeared to have reduced progression to pneumonia and reduced pneumonia-associated mortality. During the earlier period between 1992–1994, the frequency of progression of CRV infections to pneumonia and the mortality rates were substantially higher (RSV 38% and 60%, influenza 53% and 46% and parainfluenza 44% and 37% respectively). In conclusion, early diagnosis and treatment is associated with better outcome in adults with acute leukemia and BMT recipients who develop ARI.

Hepatitis C infection in hemodialysis patients

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Patients with chronic kidney failure receiving programmable hemodialysis therapy suffer from immunodeficiency. Chronic intoxication and some peculiarities in homeostasis of these patients may have a substantial influence on the course of viral infections, hepatitis C virus (HCV) infection in particular.

Objectives: The study of the differences in the course of HCV infection in hemodialysis and immunocompetent patients.

Methods: 28 hemodialysis patients and 30 immunocompetent patients, anti-HCV seropositive, were studied. In hemodialysis patients, two blood samples were studied in parallel, one taken before, and another one after hemodialysis. HCV RNA in plasma was detected by nested-PCR (RT-PCR) method. Primers, complementary to 5' non-translated region, were used. Vaccine strain of measles virus was used as a non-competent internal control in PCR analysis. Semi-quantitative assessment of PCR results was carried out by limiting dilutions of samples. HCV-specific IgM, IgG antibodies and antibodies against viral proteins core, NS3, NS4, and NS5 were detected by ELISA.

Results: Among 30 immunocompetent anti-HCV seropositive patients, HCV RNA was detected in 29 (90%), and anti-HCV IgM in 21 (70%). Among 28 hemodialysis anti-HCV seropositive patients, HCV RNA was detected in 19 (68%), and anti-HCV IgM in 11 (39%). The results of PCR analysis of blood samples before and after hemodialysis were identical. The levels of viral load in the group of hemodialysis patients with HCV viremia were also lower compared with control group. Comparative analysis of humoral immune response to HCV viral proteins core, NS3, NS4, and NS5 did not show substantial differences between the control group and the group of hemodialysis patients. Among anti-HCV seropositive hemodialysis patients, 63% of those without HCV viremia exhibited HLA phenotype DR5+, while only 33% of those with HCV viremia exhibited the same phenotype.

Conclusion: A peculiar course of chronic hepatitis C virus (HCV) infection in hemodialysis patients had been revealed. In such anti-HCV seropositive patients, a viremia appeared significantly rare (in 68% cases) in comparison with a usual population of seropositive anti-HCV patients (in 90% cases).

Oncogenic type of human papilloma virus (HPV) revealed by PCR in the oral mucosa of the kidney allograft recipients

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The aim of the study was to assess changes in the oral cavity of kidney allograft recipients under chronic immunosuppression (Cyclosporin A, Azathioprine and